

IN THE CLAIMS

Pursuant to 37 CFR §1.121(c), the claim listing, including the text of the claims, will serve to replace all prior versions of the claims, in the application.

Please cancel claims 37 and 38, and amend claims 1, 7, 13, 19, 25 and 31 without prejudice or disclaimer of their subject matter, as follows:

1. (Currently Amended) A secondary battery comprising:

an electrode assembly including a positive electrode plate, a negative electrode plate, and a separator interposed between the positive and negative electrode plates;

a metallic electrically conducting can, adapted to accommodate both the electrode assembly and an electrolytic solution, the can including a side opening;

a cap assembly including a cap plate and an electrode port, the cap plate being coupled to the side opening of the can, the electrode port being coupled to the cap plate via a gasket adapted to insulate the electrode port from the cap plate, the electrode port being connected to one of positive and negative electrode tabs respectively extending from the positive and the negative electrode plates;

a selected one of: the cap assembly having at least one aperture in a side portion thereof, and the can having at least one cavity in an external bottom surface; and

a lead plate having an upper flat surface and a lower flat surface, the upper flat surface and the lower flat surface having sizes corresponding to the aperture and the cavity,

wherein the lead plate is pressfit into a selected one of:

17 the at least one aperture of the cap plate, and
18 the at least one cavity in an external bottom surface of the can, and
19 the lead plate is tightly attached by an interference fit without welding or an adhesive to
20 the selected one of the at least one aperture of the cap plate and the at least one cavity in
21 an external bottom surface of the can and is adapted to be connected to a safety device,
22 and
23 wherein one of the upper flat surface and the lower flat surface is disposed in the
24 aperture or the cavity.

1 2. (Original) The secondary battery of claim 1, wherein the cap plate comprises
2 one of aluminum and an aluminum alloy.

1 3. (Original) The secondary battery of claim 1, wherein the lead plate comprises
2 nickel.

1 4. (Original) The secondary battery of claim 1, wherein the lead plate and the
2 safety device are connected via a port member, the port member being resistance welded
3 to the lead plate.

1 5. (Original) The secondary battery of claim 4, wherein the port member
2 comprises nickel.

1 6. (Original) The secondary battery of claim 1, further comprising a protecting
2 case arranged between the electrode assembly and the cap assembly.

1 7. (Currently Amended) A secondary battery comprising:
2 an electrode assembly including a positive electrode plate, a negative electrode
3 plate, and a separator interposed between the positive and negative electrode plates;
4 a metallic electrically conducting can, adapted to accommodate the electrode
5 assembly and an electrolytic solution, the can having at least one cavity in an external
6 bottom surface thereof and having a side opening;
7 a cap assembly adapted to be coupled to the side opening of the can; and
8 a lead plate having an upper flat surface and a lower flat surface, one of the upper
9 flat surface and the lower flat surface having sizes corresponding to the cavity,
10 wherein the lead plate is pressfit into the at least one cavity of the can, the lead
11 plate being tightly attached by an interference fit without welding or an adhesive to the at
12 least one cavity of the can and being connected to a safety device, and
13 wherein one of the upper flat surface and the lower flat surface is disposed in the
14 cavity.

1 8. (Original) The secondary battery of claim 7, wherein the can comprises one of
2 aluminum and an aluminum alloy.

1 9. (Original) The secondary battery of claim 7, wherein the lead plate comprises
2 nickel.

1 10. (Original) The secondary battery of claim 7, wherein the lead plate and the
2 safety device are connected via a port member, the port member being resistance welded
3 to the lead plate.

1 11. (Previously Presented) The secondary battery of claim 10, wherein the port
2 member comprises nickel.

1 12. (Original) The secondary battery of claim 7, wherein the cap assembly
2 comprises:

3 a cap plate adapted to be coupled to the side opening of the can; and
4 an electrode port adapted to be coupled to the cap plate via a gasket adapted to
5 insulate the electrode port from the cap plate, the electrode port being connected to one of
6 positive and negative electrode tabs respectively extending from the positive and
7 negative electrode plates.

1 13. (Currently Amended) A secondary battery comprising:
2 an electrode assembly including at least two electrode tabs extending therefrom;

3 an electrically conducting can, adapted to accommodate the electrode assembly,
4 the can including a side opening;

5 a cap assembly including a cap plate and an electrode port, the cap plate being
6 coupled to the side opening of the can and having at least one aperture in a side portion
7 thereof, the electrode port being connected to one of the at least two electrode tabs, and

8 a lead plate having an upper flat surface and a lower flat surface, the upper flat
9 surface and the lower flat surface having sizes corresponding to the aperture,

10 wherein the lead plate is pressfit into the at least one aperture of the cap plate, and
11 the lead plate being tightly attached by an interference fit without welding or an adhesive
12 to the at least one aperture of the cap plate and adapted to be connected to a safety device,
13 and

14 wherein one of the upper flat surface and the lower flat surface is disposed in the
15 aperture.

1 14. (Original) The secondary battery of claim 13, wherein the cap plate comprises
2 one of aluminum and an aluminum alloy.

1 15. (Original) The secondary battery of claim 13, wherein the lead plate
2 comprises nickel.

1 16. (Original) The secondary battery of claim 13, wherein the lead plate and the

safety device are connected via a port member welded to the lead plate.

17. (Original) The secondary battery of claim 16, wherein the port member comprises nickel.

18. (Original) The secondary battery of claim 13, further comprising a protecting case arranged between the electrode assembly and the cap assembly.

19. (Currently Amended) A secondary battery comprising:
an electrode assembly;
an electrically conducting can, adapted to accommodate the electrode assembly, the can having at least one cavity in an external bottom surface thereof and having a side opening;

a cap assembly adapted to be coupled to the side opening of the can; and
a lead plate having an upper flat surface and a lower flat surface, one of the upper flat surface and the lower flat surface having sizes corresponding to the cavity,

wherein the lead plate is pressfit into the at least one cavity of the can, the lead plate being tightly attached by an interference fit without welding or an adhesive to the selected one of the at least one aperture of the cap plate and the at least one cavity in an external bottom surface of the can and being connected to a safety device, and

wherein one of the upper flat surface and the lower flat surface is disposed in the

14 cavity.

1 20. (Original) The secondary battery of claim 19, wherein the can comprises one
2 of aluminum and an aluminum alloy.

1 21. (Original) The secondary battery of claim 19, wherein the lead plate
2 comprises nickel.

1 22. (Original) The secondary battery of claim 19, wherein the lead plate and the
2 safety device are connected via a port member welded to the lead plate.

1 23. (Original) The secondary battery of claim 22, wherein the port member
2 comprises nickel.

1 24. (Original) The secondary battery of claim 19, wherein the cap assembly
2 comprises:

3 a cap plate adapted to be coupled to the side opening of the can; and
4 an electrode port adapted to be coupled to the cap plate and connected to one of at
5 least two electrode tabs extending from the electrode assembly.

6 25. (Currently Amended) A method of manufacturing a secondary battery, the

7 method comprising:

8 forming an electrode assembly;

9 forming an electrically conducting can, the can arranged to accommodate the
10 electrode assembly;

11 forming a side opening in the can;

12 forming a cap assembly including a cap plate and an electrode port;

13 coupling the cap plate to the side opening of the can;

14 forming at least one aperture in a side portion of the cap plate;

15 coupling the electrode port to the cap plate;

16 connecting the electrode port to one of at least two electrode tabs extending from
17 the electrode assembly;

18 pressfitting a lead plate having an upper flat surface and a lower flat surface, the
19 upper flat surface and the lower flat surface having sizes corresponding to the aperture,
20 into the at least one aperture of the cap plate to tightly attach the lead plate by an
21 interference fit without welding or an adhesive to the at least one aperture of the cap
22 plate; and

23 connecting the lead plate to a safety device,

24 wherein one of the upper flat surface and the lower flat surface is disposed in the
25 aperture.

1 26. (Original) The method of claim 25, further comprising forming the cap plate

2 of one of aluminum and an aluminum alloy.

1 27. (Original) The method of claim 25, further comprising forming the lead plate
2 of nickel.

1 28. (Original) The method of claim 25, further comprising connecting the lead
2 plate to the safety device with a port member welded to the lead plate.

1 29. (Original) The method of claim 28, further comprising forming the port
2 member of nickel.

1 30. (Original) The method of claim 25, further comprising forming a protecting
2 case between the electrode assembly and the cap assembly.

1 31. (Currently Amended) A method of manufacturing a secondary battery, the
2 method comprising:

3 forming an electrode assembly;

4 forming an electrically conducting can, the can being adapted to accommodate the
5 electrode assembly;

6 forming at least one cavity in an external bottom surface of the can;

7 forming a side opening in the can;

8 forming a cap assembly;
9 coupling the cap assembly to the side opening of the can;
10 pressfitting, by an interference fit, a lead plate having an upper flat surface and a
11 lower flat surface, one of the upper flat surface and the lower flat surface having sizes
12 corresponding to the cavity, into the at least one cavity of the can to tightly attach the lead
13 plate without welding or an adhesive to the at least one cavity of the can; and
14 connecting the lead plate to a safety device,
15 wherein one of the upper flat surface and the lower flat surface is disposed in the
16 cavity.

1 32. (Original) The method of claim 31, further comprising forming the can of one
2 of aluminum and an aluminum alloy.

1 33. (Original) The method of claim 31, further comprising forming the lead plate
2 of nickel.

1 34. (Original) The method of claim 31, further comprising connecting the lead
2 plate to the safety device with a port member welded to the lead plate.

1 35. (Original) The method of claim 34, further comprising forming the port
2 member of nickel.

1 36. (Original) The method of claim 31, further comprising:
2 forming the cap assembly to include a cap plate coupled to the side opening of the
3 can;
4 forming the cap assembly to include an electrode port coupled to the cap plate; and
5 connecting the electrode port to one of at least two electrode tabs extending from
6 the electrode assembly.

Claims 37 and 38. (Canceled)